CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: PARKS AND RECREATION
COMMISSION

FROM: Steve Hammack

SUBJECT: BUSINESS INTELLIGENCE UPDATE

DATE: 02-05-14

Approved   Date

COUNCIL DISTRICT: Citywide

RECOMMENDATION

Accept staff report on the Parks Division Maintenance Business Intelligence Project.

BACKGROUND

The Department of Parks, Recreation and Neighborhood Services (PRNS) maintains 1,717 acres of developed public lands which includes 184 neighborhood parks, 9 regional parks, and 55 civic grounds. Services include turf maintenance, landscape, construction, repair, equipment maintenance, custodial services, and special event services that keep the City's parks clean, green, and safe for the community.

PRNS is committed to building forward in parks maintenance by identifying and expanding best practices of our staff, instituting new ways of providing service, and developing measurable processes to chart our successes and challenges. To that end, PRNS has applied Business Intelligence (BI), a set of theories, methodologies, processes, architectures, and technologies that transform raw data into meaningful and useful information for park management purposes. A Technical Advisory Committee (TAC) was formed to facilitate this process.

The PRNS Parks Division implemented BI to determine exact services and activities rendered and the unit cost by service level types. This line staff-driven effort engaged staff as business partners, and empowered them to make analytics-based business decisions to ensure services are provided efficiently. In addition, a BI data collection system was developed for the Parks Maintenance staff to input data daily, and generate reports to provide a review of labor, materials, and equipment used for each activity.

At the March 13, 2013 Parks and Recreation Commission presentation, the commissioners requested a progress update on the Infor Enterprise Asset Management (EAM) database system and the status of Parks BI. This report provides an update on the Infor EAM implementation, progress on BI Technical Advisory Committee activities, and outlines next steps.

ANALYSIS

The progress of the Park Maintenance BI can be attributed to the work of the TAC comprised of representatives from each park maintenance classification, and from the seven Parks Maintenance Districts (PMD). During the past year, accomplishments have been in the following areas:

1) Transition from the Microsoft Access database to the Infor EAM system effective December 2, 2013. Activities included:
   a. Infor EAM database training for all parks maintenance staff – staff were provided with in-house developed training manuals. Trainings were conducted at the San José State University (SJSU) computer labs which required coordination with San Jose Library, SJSU and City IT staff. A total of eight 6-hour training sessions were held to ensure all staff received formal training on the database.

   b. Developed and input maintenance schedules for each PMD – each PMD team developed a schedule of activities conducted on a daily/weekly basis for input into the database. This is different from previous management practices where each team's plan was not formally document or tracked. Thus staff was not able to evaluate the delta between what needed to get done and what actually got done.

2) Developed Core services and Activities for the Parks Maintenance team. These include:
   a. *Custodial/Janitorial* – Refuse collection; Litter removal; Building maintenance; and Vandalism repair.
   b. *Grounds Maintenance* – Turf; Shrub and Groundcover; Trail, Tree, Hard-scape and Infrastructure; Irrigation repair; Weed and Pest abatement; and Storm Water protection.
   c. *Sports Field Maintenance* – Turf; Sports Amenities; and Infield.
   d. *Playground Maintenance* – Repair; and Inspection.
   e. *Renovation and New Installation* – installation or renovation of water lines, playground and turf
   f. *Special Events Support* – Special Park Permits Events; Volunteer; and Contracts Management.

   PRNS will be able to realize the cost of each of the core service and associated activity, including labor and materials.

3) Developed a quarterly BI newsletter (Attachment A) to facilitate the updating of staff on the BI project and provide training tidbits.

Currently, PRNS has assigned a limited–term Program Manager and a Recreation Leader to this project. In addition, a community college student volunteers to provide support for the development of this project. The ongoing progress of this project, its success, and future expansion is contingent on the availability of technical expertise, administrative, strategic and leadership support. Meaningful and permanent oversight of the database and the project is necessary to ensure accurate data input and for smooth operations. Furthermore, strong and consistent oversight will ensure effective use of analytics to make operational and policy decisions.

Next Steps

1) Deploying a pilot using mobile devices for Infor EAM
2) Inclusion of over 200 trails into the database
3) Expansion of the BI project to include Parks Capital Infrastructure team
4) Efficiency review and report-out at the March 05, 2014 PRC meeting
5) Status update to the Neighborhood Services and Education Committee (NSE) in April, 2014.

CONCLUSION

Business Intelligence will help teams throughout the Parks Division by identifying areas of improvement in time management and service delivery costs.

Through data, analytics, and activity based costing, the Parks Division will be able to provide the most cost effective services, enhance existing services, and maintain services of new development. Staff will be able to articulate cost and level of services, provide supporting data and make recommendations during the budget process. BI will create high performance teams in the parks maintenance unit, and eventually to all other units in the division.

STEVE HAMMACK
Deputy Director
Parks, Recreation and Neighborhood Services

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Parks, Recreation and Neighborhood Services

Parks BI Gazette

VOLUME 1, ISSUE 1

FALL 2013

BI Technical Advisory Committee (TAC) News

New members have joined us this year, and together with returning members who have history on the project, we will move the project forward and keep us on track.

Returning Members:

- Adriel Castro
- Alfredo Solis
- Aturo Catbagan
- Cindy Rebhan
- Jaime Ruiz
- Jeff Gomez
- Jody D-Reyes
- John Marin
- Rob Reynolds
- Steve Hammack
- Troy Trede

New Members:

- Albert Rodriguez
- Athena Trede
- Brandon Casper
- Demetrius Johnson
- John Dixon
- Lance Loveday
- Mike Will
- Pamela Velasco
- Randy Adams
- Russ McKenzie
- Teresa Meyer-Calvert

We would like to give a hearty thanks to all those who completed their service to TAC this past year:

- Alex Pearson
- Andre Morrow
- Dave Arroyo
- Elton Rodriguez
- Greg Mefferd
- Joe Corrales
- Joshua Saavedra
- Liz Neves
- Mary Heidler
- Paul Formico
- Rudy Acosta
- Tony De Anda

If by chance we have missed anyone, please forgive us. Know that your service is greatly appreciated and will be mentioned in the next newsletter if you let us know.

Members represent each Park Maintenance District and are responsible to bring forward issues, suggestions or process improvements that are learned in the field, to share with all. They are also responsible for ensuring proper communication back out to the field.

TAC Meeting in Progress

The purpose of the TAC is to keep Business Intelligence in the forefront of the Parks Division in a way that includes everyone so that sound business decisions can be made.

*Meetings are held the First and Third Wednesday of each month from 12:30pm – 2:00pm

BI Technical Advisory Committee (TAC) News (Continued)

Welcome Aboard

Troy Trede, Senior Maintenance Worker and Technical Team member has joined the BI Project team at City Hall to assist with the Infor EAM structure development. Troy will act as a liaison from the field, ensuring the system, when deployed, incorporates field experiences and is built with the end-user in mind. Troy brings with him years of field experience and the analytical skills to assist the development of the system and make recommendations for effective deployment. This includes assistance with the development of training modules and Scheduled Maintenance work orders.

Please also welcome **Pamela Velasco,** who has been working with the system for the past couple of months, cleaning up the various lists and learning the quirks in the system, to ensure smooth operation. She will be working on developing custom reports to generate analytics that can be sent to Parks Division Senior Staff and City Council. Pamela graduated from UC Irvine and is excited about the challenge. Let's all welcome Pamela aboard!

A third member of the team is **Kevin Church,** who is going to be primarily responsible for developing custom reports and the training modules. He is currently a student at De Anza College studying Computer Engineering. Please welcome Kevin to the team!

City Manager Excited About Parks BI

On Friday September 6th, City Manager Debra Figone and Deputy City Manager Norberto Duenas spent a few hours visiting with Parks staff and looking at the fruits of their labor at several parks. Kudos to Tony De Anda, Dave Arroyo and their respective staff for showing off their wonderful work and advocating for us. The team toured River Glen, Bramhall, Calabazas, Plata Arroyo and River Oaks parks. Parks team members shared BI data generated from the River Oaks (5 acres) and Penintencia (40 acres) parks. The data (shown on the right) demonstrates the difference in service levels and our need for additional resources. The City Manager's team was excited about what they saw and learned. By continuously generating data that is complete and accurate, you can be sure that the needs of the Parks Division will be recognized and receive notice.

River Oaks Park   (April 1, 2013 - June 30, 2013)

Regular Hours	Overtime Hours	Unpaid Labor Hours
318.50	5.00	22.00

Penintencia Creek Park   (April 1, 2013 - June 30, 2013)

Regular Hours	Overtime Hours	Unpaid Labor Hours
243.00	26.00	136.00

What is Business Intelligence?

Business Intelligence (BI) is a combination of methods and technologies that gather, store, report, and analyze data to help staff make business decisions at operational and strategic levels. It collects today's data to make decisions for tomorrow.

Did You Know?

Q: How many liners did we change last year?

   A: 399,825   B. 125,658   C. 652,452

Q: Linear feet of turf we edged last year?

   A: 885,321   B. 1,256,378   C. 4,574,040

Q: How many acres did we mow last year?

   A: 300,985   B. 289,179   C. 165,855

New BI Database To Launch Soon!

The new BI database with Infor EAM (Enterprise Asset Management) will be launched during the months of November and December. The database is currently in the Testing/Training phase. At a recent TAC meeting, Parks Maintenance Districts 1, 5, and 7 volunteered to participate in this process. Training has been scheduled for October 11th and the week of October 21st. This test/training phase will allow us to troubleshoot the system before it is fully deployed into the field during the months of November and December.

Using Cognos (an Advanced Report Writer), the Infor EAM system will be able to generate reports that will show the maintenance costs at each park system and subsequently assist us in developing a cost per acre for parks maintenance.

Report to Neighborhood Services and Education (NSE)

On June 13, Parks staff presented a BI report to the NSE, a subcommittee of City Council. Benefits realized by the work teams during the initial 10 months of the project were highlighted including:

- Volunteers and unpaid staff logged in approximately 25,000 hours in tasks such as garbage/litter pick up, watering, leaf/debris removal, and cleaning hard surfaces. This is equivalent to 12 FTE's.

- Over 1,000 hours of labor has been recorded for Community Special Events preparation. These hours are currently being absorbed within the current budget. It must be noted that regularly scheduled maintenance hours and service levels are reduced as a result.

Council members expressed appreciation and were excited about this initial report. They asked staff to bring forward a report in the future outlining our program needs. You know your efforts on data collection are beginning to make a mark when Council members ask us **"Tell us what do you need?"**

Answer Key: Did You Know?

Q: How many liners did we change last year?

A. 399,825

That's approximately 20,000,000 gallon of trash we removed from parks last year! Way to keep it clean!!

Q: Linear feet of turf we edged last year?

C. 4,574,040

That's 866 miles! In other words WE edged the distance from San Jose to Seattle!!

Q: How many acres did we mow last year?

B. 289,179

That's 452 square miles. That's mowing all of New York City which is 468 square miles.

City of San José

Parks Maintenance Business Intelligence

Progress Report to the

Parks and Recreation Commission

February 5, 2014

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY

Presentation Team

Abraham Chacko, Acting Program Manager

Adriel Castro, Gardener

Troy Trede, Senior Park Maintenance

Accomplishments

◆ Infor EAM solution implemented

◆ Core services and Activities developed

◆ Quarterly Newsletter (BI Gazette) published

Parks Maintenance Core Services

1. Custodial/Janitorial
2. Grounds Maintenance
3. Sports Field Maintenance
4. Playground Maintenance
5. Renovation and New Installation and
6. Special Events Support.

Next Steps

1. Pilot mobile devices

2. Inclusion of 200 trails system into Infor EAM

3. Expand BI to include Capital Infrastructure team (CIP)

Next Steps

4. Efficiency review and report-out at the March 05, 2014 PRC meeting

5. Status update to the Neighborhood Services and Education Committee (NSE) in April, 2014.

Questions & Answers